

Earthquakes on the Surface

4-6

Wendy Shindle



Developed by Robert E. Crippen (JPL) and Ross Stein (USGS)

Key Points:

- When a fault moves, sometimes the results of the movement can be seen on the surface of the earth.
- Scientists can see where faults are likely to be by looking at the distribution of earthquakes, and by looking at features on the surface of the earth.
- Many landforms in Southern California and around the world are formed as a result of earthquakes.

-

Procedure:

1. Have the students look at a topographic or relief map of Southern California and discuss what they see. Where are the mountains? Are there any areas that make lines or form patterns?
2. Show them a map of earthquake activity in Southern California. Are there any areas that have more earthquake activity than others? What can you deduce from this? Are there any clusters of activity? Does the earthquake activity correspond to any features on the map like mountains or valleys?
3. Give them a topographic or relief map of Southern California and have them draw in where they think the faults might be.

4. Give them a fault map of Southern California and have them compare it to their answers.
5. Name and label the major faults.
6. Look at a map of another area and see if they can locate any faults or fault features.

Questions:

1. Do faults form mountains or valleys?
2. Do streams sometimes flow along faults? Why?
3. Which areas have the most faults?
4. Are the areas with the most earthquakes the ones with the most mountains?
5. Why do some areas have more earthquakes than others?

Extension:

1. Have the students choose a fault and do a report on its past earthquake activity.
2. Monitor earthquake activity in Southern California for several weeks and see which areas have the most earthquakes. Is this observation consistent when compared to the earthquake activity in that area in previous years? Why or why not?
3. Do the Fault Features Activity.